BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF HAWAI`I

In the Matter of	)	DOCKET NO. 2008-0273
	)	
PUBLIC UTILITIES COMMISSION	)	
	)	
Instituting Proceedings to Investigate the Implementation Of Feed-in Tariffs.	)	
	)	

CITY AND COUNTY OF HONOLULU'S RESPONSES TO APPENDIX A QUESTIONS AND OTHER THRESHOLD ISSUES IN APPENDIX C OF THE NATIONAL REGULATORY RESEARCH INSTITUTE SCOPING PAPER

AND

CERTIFICATE OF SERVICE

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The CITY AND COUNTY OF HONOLULU (City), by and through its attorneys, Corporation Counsel, Carrie K. S. Okinaga, and Deputy Corporation Counsel, Gordon D. Nelson, hereby submits its preliminary responses to questions and issues (other than threshold legal issues) posed in Appendices A and Commission's "Scoping Paper" entitled, "Feed-in Tariffs: Best Design Focusing Hawaii's Investigation", prepared by its consultant, National Regulatory Research Institute ("NRRI") and served on the parties herein. The City respectfully reserves its right to further elaborate its responses in future submissions in this docket as may be appropriate.

I. APPENDIX A COST DATA FORMS

The City has had some experience, though not as a developer, in the renewables arena with the development of its H-Power municipal waste facility, the electric energy

output of which is sold to Hawaiian Electric Company, Inc. ("HECo") pursuant to a Power Purchase Agreement ("PPA"). The City is currently in the process of contracting with a developer for the expansion of that facility by the addition of a third boiler (the "Third Boiler"). Each of these projects is large scale (58 MW and 27 MW respectively). The City does not currently have plans for any projects in the smaller size ranges that the Scoping Paper and the Joint Proposal filed by HECo and the Consumer Advocate seem to contemplate for a project-based feed-in tariff ("PBFiT"). Further, the City does not plan to submit any project under the PBFiT in its present proposed form. (The City does have plans for certain rooftop photovoltaic projects in the near future, but anticipates that it will consume on site all power generated by these projects).

Besides being large-scale utility-sized projects, H-Power and the Third Boiler have unique designs, development costs, development requirements, public financing arrangements, energy pricings, performance requirements, locations and other characteristics. The City does not believe it can identify or determine from them the "typical" development costs for smaller scale PBFiT projects. As a result, the City is unable to provide, based on its own existing projects and projects under development, the information called for in Appendix A to the Scoping Paper.

If the Commission requests the City provide any cost and related information on H-Power or the Third Boiler, it would seek to provide the information requested to the Commission and the Consumer Advocate on a confidential basis, pursuant to the Protective Order, filed on January 6, 2009, in this docket.

II. APPENDIX C - OTHER THRESHOLD ISSUES

Other Threshold Issues

4. **Feed-in tariffs, if approved by the Commission, would join an array of legislative and regulatory initiatives to boost production of renewables in Hawaii. Those initiatives include PURPA, the renewable portfolio standard, net metering and various distributed generation actions. Are there overlaps, redundancies, gaps among these multiple initiatives? What is the independent purpose of each of these, in relation to the others?**

   Until the forms of Feed-in tariffs are determined by adoption by the Commission it is difficult to say whether there are there are overlaps, redundancies, gaps among the various identified initiatives. Part of the design process should perhaps be to eliminate overlaps and redundancies that are identified and fill in gaps that are found to exist.

Process and General Feed-in Tariff Issues

5. **Please explain the criticality of completing the "best-design" phase of this investigation by March 2009 and having project-based FiTs in place by July 2009 as called for in the Agreement.**

   This question must in the first instance be answered by the signatories to the HCEI Agreement, who have sought to impose these deadlines on this Docket. As far as the City is concerned, these dates are not critical. This Docket could proceed more deliberately.

6. **Please explain why project-based FiTs are superior to other methods that require utility to purchase renewable electricity.**

   There seems to be empirical support from the European experience for the proposition that a PBFiT is a superior method for accelerating the addition of renewable energy from new sources and for maximizing renewable penetration. However, these are only two of the objectives identified by KEMA for a PBFiT.

   Other objectives identified by KEMA include: maintaining system reliability, grid stability and safety standards; minimizing policy costs to ratepayers; complementing the existing Hawaii policy framework as much as possible, while targeting gaps in current renewable energy policy tools; stabilizing electric rates over time; providing predictability and certainty; and simplicity.

   Whether a PBFiT is superior to other methods in achieving each of these other objectives is not self-evident.

7. **Please quantify the costs over avoided costs of an open-ended PBFiT program assuming the utility meets the RPS goals set forth in the Agreement.**

The City is unable to answer this question. It does not have the data to calculate or quantify PBFiT costs over avoided costs. Such a quantification of would seem to require one to make numerous assumptions concerning yet-to-be-established PBFiT rates and tariff terms for each renewable technology and concerning the levels of renewable penetration that to be achieved in the future. Further, it is clear neither over what period of time the comparison is to be made, nor what is meant by "an open-ended PBFiT program" (PBFiTs with no caps?).

8. **Please quantify the benefits of lowering oil imports, increasing energy security, and increasing both jobs and tax base for the state mentioned in the Agreement.**

Without doubt, lowering oil imports, increasing energy security, and increasing both jobs and the tax base will qualitatively benefit the state. The City's H-Power facility for example, reduces oil needs by 600,000 barrels annually. At $75 a barrel this would amount to $45,000,000 a year, and this savings is bound to have some multiple effect throughout Hawaii's economy. The City, however, does not have data on, and has not studied these matters and is unable to answer this question quantitatively. It may be that the signatories to the HCEI Agreement or energy analysts at DEBDT have data regarding these matters that would permit such quantification.

9. **Is the goal to encourage as much use of renewable resources as possible as soon as possible, or is it to encourage the orderly introduction of renewable resources based upon cost effectiveness?**

No single, paramount goal for PBFiTs has been enunciated. As indicated in the response to question 6, KEMA, in describing the objectives of the Joint HECo/Consumer Advocate Proposal, has identified a number of different objectives or goals. It is not clear whether these objectives have been listed in order of priority.

The HECo/Consumer Advocate Joint Proposal initially limits covered technologies, sets low caps and focuses on interconnection at the distribution level. This approach suggests that the overall goal of the Joint Proposal is more the orderly introduction of renewables. That is, greater penetration of renewables on an accelerated basis seems subordinate to the other objectives listed by KEMA: maintaining system reliability, grid stability and safety standards; minimizing policy costs to ratepayers; complementing the existing Hawaii policy framework as much as possible; stabilizing electric rates over time; providing predictability and certainty; and simplicity.

By contrast, representatives of DBEDT seem to view the main goal of PBFiTs under HCEI Agreement to be the encouragement of as much use of renewable resources as possible, as soon as possible. This also appears to have been the main goal of PBFiTs in Europe, and the reason why PBFiTs have been recently touted in the United States as a solution.

10. **How long a period should exist between mandatory Commission reviews of the PBFiTs?**

Three years, as proposed in the Joint Proposal, may be too long. Rapid developments in renewable energy technology may call for more frequent reviews. The City understands that the Netherlands and the Czech Republic have reviewed and revised tariffs annually. Before deciding upon a cycle for reviews, however, there is a preliminary design issue: whether a review should be periodic or should be triggered by reaching some capacity target.

PBFiT General Design Issues

11. **Do each of the technologies listed as a renewable resource in the RPS legislation require a PBFiT?**

It appears to have been the standard approach in Europe to develop separate tariffs for each renewable technology.

12. **Should PBFiTs for certain technologies be established now while others are deferred?**

In an ideal world, PBFiTs would be developed for all technologies now without deferral of some. However, the schedule adopted for this Docket does not lend itself to a comprehensive and thorough treatment of all technologies. The City acknowledges that the schedule requires a more focused and incremental approach. However, the City questions the exclusion of biomass and biogas technologies from the initial round of the PBFiT. There has been Hawaii experience with biomass projects and there are potential biomass and biogas projects close to being ready for development

13. **Should the Commission cap purchases under PBFiTs? If yes, what is the maximum amount? Should individual caps be set for each technology? What period should the cap cover? What is the measurement for the cap (e.g., dollars, percent of sales, kW, or kWh)?**

If the purpose of PBFiTs is to encourage development of renewable energy projects, there should be no caps at least for the initial five to ten years of development experience under this tariff. After that, an assessment of the need for caps could be made.

If caps are considered, they should be significantly higher than the caps contemplated by the Joint Proposal. It has been pointed out by a number of parties that there are no project size limits in Germany, where renewables penetration has perhaps been the most successful. Spain limits projects on its fixed-price track to 50 MW. California is currently considering a cap of 20 MW. In arguing against a 20 MW cap in California under a PBFiT, Paul Gipe, one of the contributors to the HCEI White Paper on "Feed-in Tariff Case Studies", found "no compelling justification for this specific amount. It could just as easily be 200 MW as 20 MW.... Limiting projects to only 20 MW will not enable most wind projects or concentrating solar power plants that are typically much larger than 20 MW.....The project size limit should be lifted entirely or to at least 200 MW and certainly no less than 50 MW." (Comment Letter dated December 3, 2008 to the California Energy Commission, Re: Docket No. 09-IEP-1G and No. 03-RPS-1078).

14. What limitations exist for integrating renewable resources onto the grid? Should these limits affect the PBFIT design or caps, or are they just another cost that developers must consider?

HECO has identified as a limiting factor the aggregate impact of DG from new renewable resources on the stability, reliability and operation needs of its systems. It has also stated that more DG will require more stringent performance standards and grid services. HECo maintains that trip capability will be required in many cases. These technical considerations should be addressed when interconnection studies are made after a developer applies for connection to the grid.

The European experience suggests that a "must-take" requirement is critical to the effectiveness of a PBFiT; that the tariff must find a way to eliminate limitations or barriers to connection. HECo has proposed that all of the cost of interconnection be bourn by the developer, but it is possible to provide for some degree of cost sharing. In any event, the tariff should provide for the developer's recovery of interconnection costs as part of the price received.

Specific Tariff Design Issues

15. How long should the Commission set for the PBFiT's term of obligation? Should it be different for different technologies? Is there a common basis (e.g., conservative estimate of expected useful life) for establishing the term of obligation? On what basis should a utility pay for electricity after the term expires?

Contract terms should be no less than 20 years. Shorter contracts require higher tariffs and thus pose greater difficulties in arriving at realistic prices. Longer terms allow lower initial tariffs. Regarding payment for post-contract production, see the answer to 17 below.

16. **Should PBFiTs require the utility to purchase the project's gross or net output at the PBFIT price?**

Requiring the utility to purchase only the net output at the PBFIT price would be consistent with Power Purchase Agreements with which the City is familiar.

17. **How should the utility determine the price paid for renewable energy not covered by a PBFiT (e.g., purchases above the cap or beyond the term of obligation?)**

This issue is avoided to the extent that PBFiTs are not capped.

With respect to post-contract production, HECo has suggested that the parties could agree to continue to operate under the PBFiT rate on a year to year basis. That begs the question when the parties cannot agree. Perhaps the utility should be required to continue to purchase all post-contract production, but at a discounted wholesale green rate (discounted because it is not a new source). This would benefit the utility and its ratepayers by guaranteeing a continuing source of inexpensive green power and would benefit the developer by extending its income stream.

NRRI should be asked to elaborate on the options it identified: auctions, RFPs and avoided-cost purchases.

18. **What inflation adjustment, if any, should the PBFiT include, using what base and indexes?**

Clearly, protection of equity invested and debt at risk from inflation should be a feature of a PBFiT. Without inflation protection the initial tariff must be higher to accommodate inflation risk. With inflation protection, the initial tariff can be lower than otherwise. The City has no suggestions at this time regarding an appropriate base or index.

19. **What milestones (e.g., commercial operations) should the Commission set to determine eligibility for the PBFiT? Are Hawaii's RPS statute requirements an eligibility requirement? Should utility affiliates be eligible to receive the PBFiT price?**

The City agrees that a well designed PBFiT should remunerate clean power developers for actual power produced instead of rewarding developers for achieving preliminary milestones in the development process. Commercial operation should be the key milestone.

The RPS statute provides a starting point for determining eligibility. It should perhaps be reviewed to determine if it is sufficiently comprehensive.

The utilities should already be developing renewable resources under the RPS. Permitting utility affiliates to receive the PBFiT price gives the utilities extra incentives to do what they are already required to do. Further, if caps are adopted, developers will be competing with each other for places in the queue. There is the potential for a utility affiliate to deny a place in the queue to an independent developer.

20. Please comment on the need for stepped tariffs based upon location, size, fuel mix, and output.

"Stepped tariffs" would seem to be needed in order to capture variations in development costs that can result from project location, size, fuel mix, etc. There may be a risk, however, of introducing too much complexity. Striving for simplicity in tariff design has been touted as important to making financing more available.

21. Under what circumstances should the PBFiT price be time-differentiated?

To the extent permissible, the PBFiT price should be time-differentiated to encourage on-peak production for technologies that can follow load.

22. How highly leveraged (i.e., bearing how much debt compared to equity) are these projects?

The City cannot answer this question. It has little insight into the financing environments in which developers of the various renewable technologies operate.

23. Does a PBFiT create a financing environment through a reliable revenue stream from the ratepayer to the investor, allowing for greater leverage *and* thus lower cost financing than would be available under an avoided-cost tariff?

Yes. The City agrees with the statements made regarding access to capital on page 14 of the NRRI Scoping Paper.

24. If the PBFiTs are to encourage early development of resources, does the reasonable return need to be set higher for these early tariffs? Are there reasons other than encouraging early development to set the profit margin higher, such as risks associated with early implementation? Is this true across all project classes?

There are any number of considerations that could lead to setting a higher tariff, besides the desire to encourage the early development of particular types of resources. In Germany for example there are adders within the biomass feed-in

tariffs for systems that use agricultural waste products. Hawaii could provide for adders for the technology related to the use of waste. The PBFiT could be structured to provide adders for facilities that do not require significant added transmission investment.

25. Does the current "credit crunch" affect the financing costs, including expected profits by equity investors?

Undoubtedly. To the extent that credit is available at all, it will be more expensive than in the recent past. Where equity investors are required to assume more of the financial risk in a project because credit is less available, they can be expected to demand a higher rate of return. The "credit crunch" reinforces the need for a tariff that will result in guaranteed income streams to developers. Only by enhancing the credit quality of these projects in this fashion will the necessary financing become available.

Related Issues

26. Please provide a quantitative analysis demonstrating the public interest aspect of the concept that 10% of the utility's purchases under the feed-in tariff PPA should be included in the utility's rate base through 2015. In addition to the overall prudence of the rate base recommendation, please address the 10% and 2015 date included in the Agreement.

This question should be addressed to the signatories of the HCEI Agreement, who have agreed among themselves regarding this concept, but have not, to the City's knowledge made a case for it. The City does not perceive the policy purpose to be served in paying the utility an incentive to make purchases that should be mandatory under the terms of the tariff.

27. What is the appropriate rate of return for the PBFiT portion of rate base that consists of a mandated purchase with guaranteed recovery and no capital outlay?

The fact that there is no capital outlay makes it difficult to articulate a rational basis for any rate of return.

28. Are there preferable utility incentives, other than putting PBFiT revenues into the rate base, to encourage the development of renewable resources?

Again, the City does not perceive the need to provide incentives for the utility to make purchases that should be mandatory.

29. **Should the PBFiT require developers to assign credits (e.g., investment tax credits, renewable energy credits, and carbon credits) earned from a project to the purchasing utility as a condition of receiving payments under the PBFiT? If not, how should these credits be included in the estimation of a typical project's cost?**

The City does not believe renewable energy developers should be required to assign tax credits, renewable energy credits, carbon credits or similar credits to the utility. The basic PBFiT price should be set without consideration of these credits. If the developer negotiates with the utility for an assignment of such credits, this should be a separate contract, or at least a separate pricing component.

DATED: Honolulu, Hawaii, January 27, 2009.

Respectfully submitted,

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CERTIFICATE OF SERVICE

The foregoing document was served on the date of filing by electronic transmission on the date of signature to each of the parties listed below.

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